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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,708	07/01/2003	Roger D. Foster	B04.12-0065	4454

7590 08/06/2004
Nickolas E. Westman
Westman, Champlin & Kelly
Suite 1600
900 Second Avenue South
Minneapolis, MN 55402-3319

EXAMINER

ALLEN, ANDRE J

ART UNIT	PAPER NUMBER
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2855

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/611,708	Applicant(s) FOSTER ET AL.	
	Examiner Andre J. Allen	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on app. as filed 7-1-03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-19 is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7-2-03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 4 is objected to because of the following informalities: It appears claim 4 is introducing a third corrugation and re-introducing a second port since claims 1-3 is discussing a first and second corrugation with first and second ports. It isn't clear if the applicant is referring to two or three corrugated portions. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 is rejected under 35 U.S.C. 102(b) as being anticipated by DeLeo et al. 697'

Regarding claim 1 DeLeo et al teaches A static pressure sensing probe 10 for use with an aircraft (col. 2 line 51), the probe having an aerodynamically shaped cross section and a length protruding from a base portion 12 , the base

portion being mounted on an aircraft surface, (col. 2 line 51) the probe length being sufficient to extend beyond a boundary layer of air on the aircraft surface (col. 2 line 61-65), at least one surface corrugation (col. 3 lines 20-23, 30-35 col. 5 lines 20-25) on the probe extending laterally out from the base portion along the probe length to cause a pressure change in air flowing over the corrugation, and a first pressure sensing port 16 on the probe 12 in a selected position adjacent to the surface corrugation.

Regarding claims 2 and 4 DeLeo teaches the surface corrugation is an upstream corrugation relative to air flowing over the probe (col. 3 lines 20-23, col. 5 lines 20-25), a second downstream surface corrugation on the probe formed substantially parallel to the upstream surface corrugation (col. 3 lines 30-35 col. 5 lines 20-25), a second pressure sensing port on the probe adjacent to the downstream surface corrugation, the first and second pressure sensing ports being positioned at locations to provide a selected static pressure function (col. 3 lines 40-55).

Regarding claim 3 DeLeo et al teaches said corrugation comprises a ridge 27 28 raised upwardly from a generally aerodynamically shaped upper surface of the probe (col. 3 lines 26-30).

Regarding claims 5 and 6 DeLeo teaches the second pressure sensing port positioned 23 at a location wherein the sensed static pressure is at a desired relationship to static pressure sensed at the first pressure sensing port (col. 4 lines 1-20). Also, a location wherein the static pressures

sensed at the first and second ports are substantially equal at a known orientation of the probe relative to the airflow (col.5 lines 44-68)

Regarding claim 7 DeLeo teaches top and bottoms spaced walls having the top and bottom surfaces, the spaced walls forming a pressure chamber 22 34, and the first 23 and second ports 24 both opening to the pressure chamber (col. 3 lines 40-50).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeLeo et al '697.

Regarding claim 8 DeLeo teaches the corrugations cause a normalized pressure function to change at different locations in a direction on the probe substantially parallel to the direction of air flow over the probe (col. 3 lines 20-23,col. 5 lines 20-25) (col. 3 lines 30-35) but does not teach $(P_m - P)/q_c$ and wherein P_m is measured pressure, is local static pressure, and q_c is total pitot

pressure minus true static pressure. However, lacking any criticality it would have been obvious to one having ordinary skill in the art at the time the invention was made to derive a mathematical expression from pressure functions that change in different locations as taught by DeLeo for the purpose of accurately determining flight parameters directed to pressure within an aircraft.

Allowable Subject Matter

4. Claims 9-19 is allowed.

The following is an examiner's statement of reasons for allowance: The cited prior art does not disclose nor suggest the probe cross section perpendicular to a length of the probe between the base and the outer defining upper and lower surfaces that have convex aerodynamically contoured, surface portions adjacent the respective leading and trailing edges.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre J. Allen whose telephone number is 571-272-2174. The examiner can normally be reached on mon-fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.J.A
Art Unit 2855


EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800